

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-28 (cancelled)

Claim 29 (currently amended): A method of controlling the movement of a legged figure coupled to a drive mechanism, the method comprising:

receiving a command from an input device, the command representing a velocity to move the figure;

translating the velocity into a step length;

moving the entire figure at the velocity represented by the received command using the drive mechanism, wherein the act of moving the entire figure is implemented by a wheeled vehicle coupled to the figure;

while the figure is moving, coordinating the leg movement by moving a first leg a distance corresponding to the step length; and

moving a second leg once the first leg is planted on the ground.

Claim 30 (previously presented): The method of claim 29 wherein the input device directly controls the velocity.

Claims 31-37 (cancelled)

Claim 38 (previously presented): The method of claim 29 wherein the act of moving the first leg comprises determining the force when contacting the ground.

Claims 39-52 (cancelled)

Claim 53 (previously presented): The method of claim 29 wherein the act of moving the first leg comprises moving the first leg along a partially predetermined trajectory.

Claim 54 (previously presented): The method of claim 29 wherein the act of moving the first leg comprises moving the first leg along a partially predetermined trajectory.

Claim 55 (previously presented): The method of claim 29 wherein the act of moving the first leg comprises moving the first leg to a predetermined height.

Claim 56 (previously presented): The method of claim 29 further comprising:
translating the velocity into a step time; and
completing the act of moving the first leg within the step time.

Claim 57 (previously presented): The method of claim 29 further comprising:
stopping vertical motion of the first leg at the conclusion of a step when a preset ground force threshold is exceeded.

Claim 58 (previously presented): The method of claim 57 wherein the ground force is sensed indirectly by reading the current commanded to actuators in the first leg.

Claim 59 (previously presented): A method of controlling the movement of a legged figure, comprising:

coupling the legged figure to a wheeled support, the wheeled support being propelled by a drive mechanism;

receiving a command from an input device, the command representing a velocity to move the wheeled support;

translating the velocity into a step length of the legged figure;

moving the wheeled support at the velocity represented by the received command using the drive mechanism; and

simultaneously moving the legged figure by moving a first leg a distance corresponding to the step length and moving a second leg once the first leg is planted on the ground, the movement of the legged figure being synchronized with the movement of the wheeled support.

Claim 60 (previously presented): The method of claim 59 wherein the moving the first leg comprises moving the first leg along a partially predetermined trajectory.

Claim 61 (previously presented): The method of claim 59 wherein the moving the first leg comprises moving the first leg to a predetermined height.

Claim 62 (previously presented): The method of claim 59 further comprising:

stopping vertical motion of the first leg at the conclusion of a step when a preset ground force threshold is exceeded.

Claim 63 (previously presented): The method of claim 62 wherein the ground force is sensed indirectly by reading the current commanded to actuators in the first leg.

Claim 64 (new): A method of controlling the movement of a legged figure, comprising:

coupling the legged figure to a mobile support that is propelled by a drive mechanism;

receiving a command from an input device representing a velocity to move the mobile support;

translating the velocity into a step length of the legged figure;

moving the mobile support at the velocity represented by the received command using the drive mechanism; and

concurrent with the moving of the mobile support, moving the legged figure by moving a first leg a distance of about the step length and moving a second leg a distance of about the step length after the first leg is moved the distance.

Claim 65 (new): The method of claim 64, wherein the moving of the first leg comprises moving the first leg along an at least partially predetermined trajectory.

Claim 66 (new): The method of claim 64, wherein the moving of the first leg comprises moving the first leg to a predetermined height.

Claim 67 (new): A method of controlling the movement of a legged figure coupled to a drive mechanism, the method comprising:

- receiving a command from an input device, the command representing a velocity to move the figure;

- translating the velocity into a step length;

- translating the velocity into a step time;

- moving the legged figure at the velocity represented by the received command using the drive mechanism; and

- while the legged figure is moving, coordinating the legged figure moving by first moving a first leg a distance corresponding to the step length within a time equal to about the step time and second moving a second leg a distance corresponding to the step length within a time equal to about the step time.